

ABSTRACT OF THE DISCLOSURE

A system and method for estimating noise using measurement based parametric fitting non-uniformity correction is disclosed. Fixed pattern noise ("FPN") is estimating from an overall noise component within a detection system to enhance candidate target detection and tracking. A sensor in the detection system receives energy, such as radiant flux, that is converted to a digital image. A non-uniformity correction device generates an estimated FPN according to an applicable temperate range and integration time. A memory storing an array of coefficients is accessed to determine the estimated FPN. The valves within the array of coefficients are based on actual FPN measurements that are parametrically fitted.